

What is claimed is:

1. A welding device comprising:

a powder having an identical kind of main component as that of a work piece;

5 a feeder feeding the powder to the work piece;

a welding torch generating a plasma between itself and the work piece for focusing the powder fed by the feeder on the work piece and transferring the powder to the work piece, and

a power source supplying an electric power to the welding torch,

10 wherein a distance from the welding torch to a focal point to which the powder is focused is set equal to or longer than a height of the welding torch which is a distance from welding torch to the work piece.

2. The welding device according to claim 1, wherein the distance from the welding torch to the focal point to which the powder is focused is set nearly  
15 equal to the height of the torch.

3. The welding device according to claim 1, wherein the welding torch is equipped with an electrode generating the plasma between itself and the work piece, and a chip transferring the powder to the work piece.

4. The welding device according to claim 2, wherein the welding torch is  
20 equipped with an electrode generating the plasma between itself and the work piece, and a chip transferring the powder to the work piece.

5. A method of welding comprising the steps of:

generating a plasma between a welding torch and a work piece; and

25 focusing a powder having a same kind of main component as that of the work piece on the work piece for transferring the powder from the welding torch to the work piece,

wherein, in the step of focusing the powder on the work piece for transferring the powder on the work piece for transferring the powder to the

work piece, a distance from the welding torch to a focal point where the powder is focused is set equal to or longer than a height of the torch.

6. The method of welding according to claim 5, wherein, in the step of generating the plasma, a distance from the welding torch to a focal point where a plasma is  
5 focused is set nearly equal to the height of the torch.

7. The method of welding according to claim 5, wherein, in the step of focusing the powder on the work piece for transferring the powder to the work piece, at least two different component materials are employed for the work pieces and the pieces are welded with a gap made between respective component material.

10 8. The method of welding according to claim 6, wherein, in the step of focusing the powder on the work piece for transferring the powder to the work piece, at least two different component materials are employed for the work pieces and the pieces are welded with a gap made between respective component material.

9. The method of welding according to claim 5, wherein a chip is replaced as a  
15 method of altering the distance from the torch to the focal point to which the powder is focused.